

Broward Water Resource Task Force

Multi-Jurisdictional Water Supply Projects - California

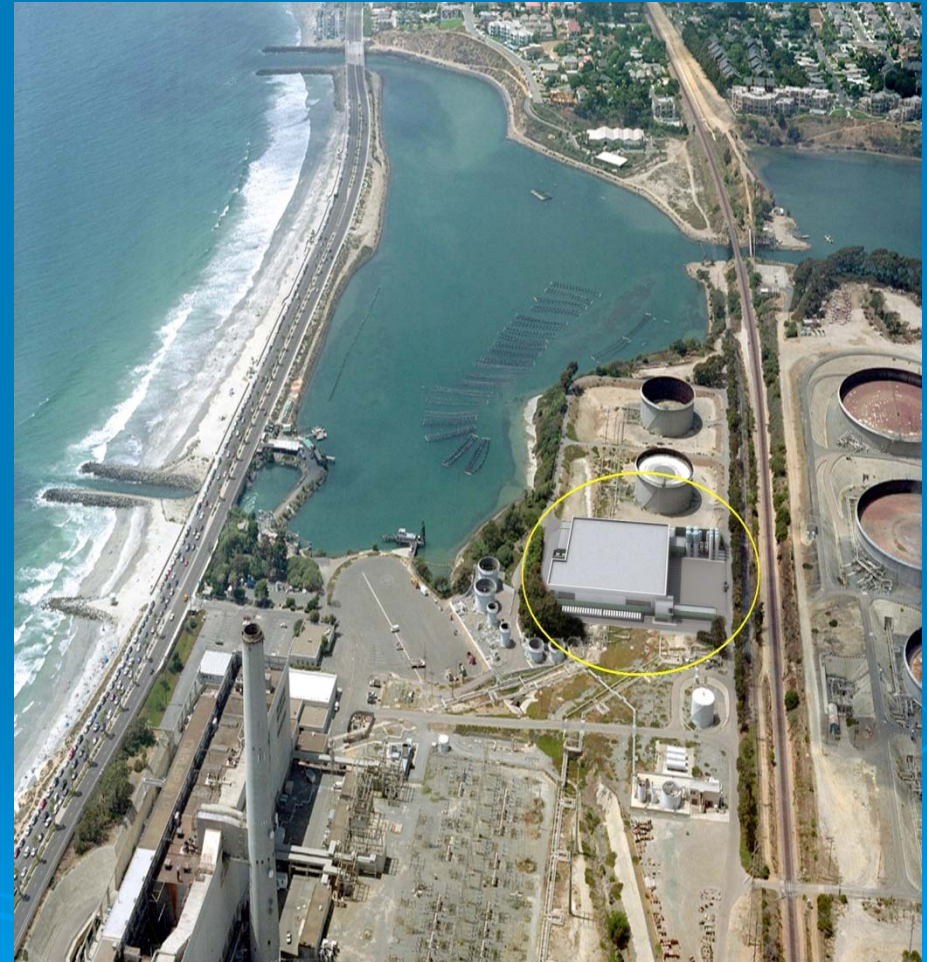
Walter Winrow
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Items for Discussion

- Carlsbad Desalination Project
- Five Elements for Success
- Observations

Carlsbad Seawater Desalination Project

Location:	<i>San Diego County - City of Carlsbad</i>
Technology:	<i>Reverse Osmosis Desalination</i>
Estimated Cost:	<i>\$350 Million</i>
Quantity:	<i>50 MGD (56,000 AFY)</i>
Permits:	<i>All Discretionary Approvals Received</i>
Supply Agreements:	<i>Over-subscribed</i>
Construction Contract:	<i>Final Negotiation</i>
Schedule:	<i>On-Line 2011</i>



Desalination Project at the
Encina Power Plant in Carlsbad, California

Five Necessary Elements

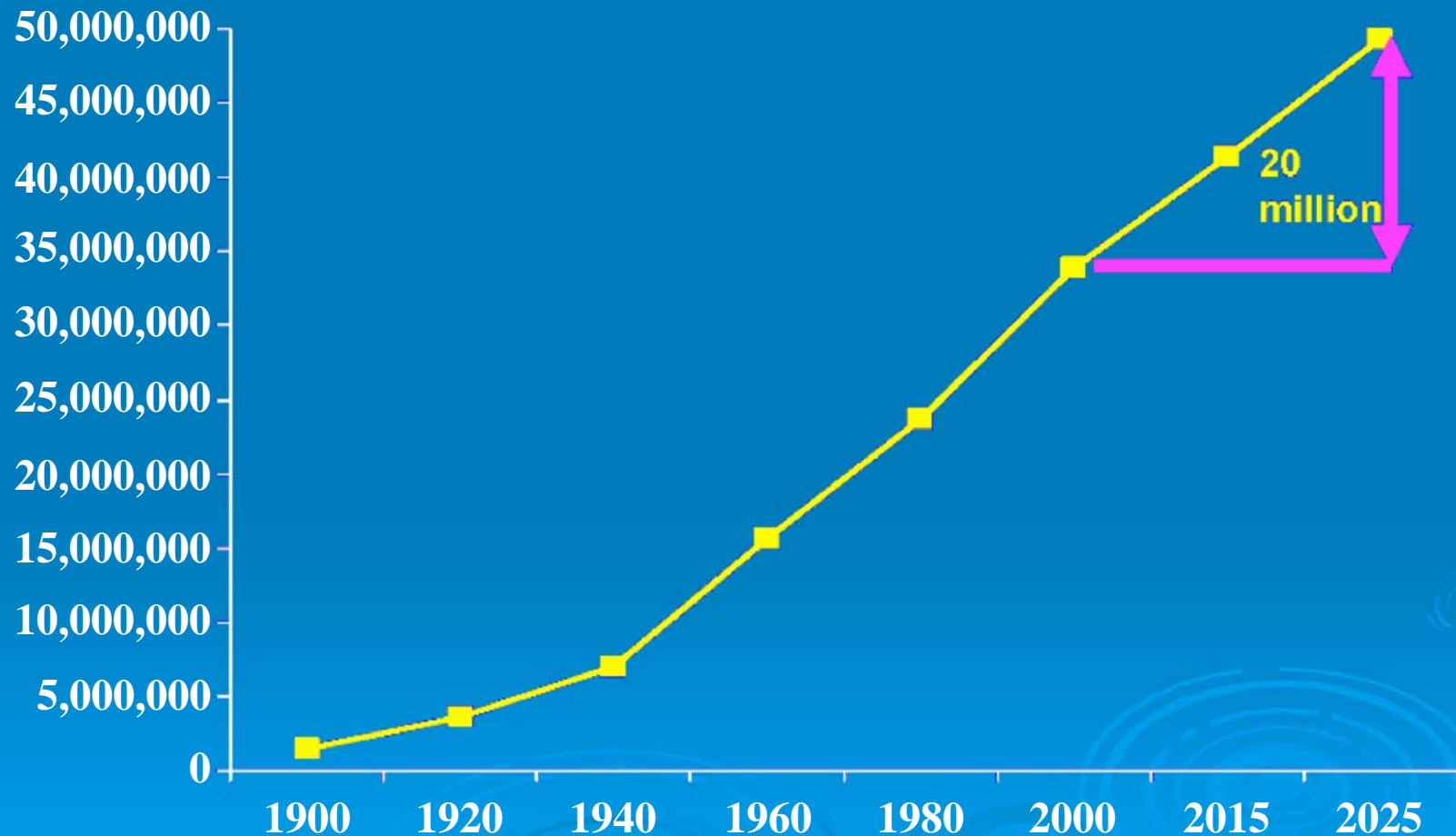
1. Need
2. Physical Interconnection
3. Organizational Interconnection
4. Financial Support
5. Leadership

Five Necessary Elements

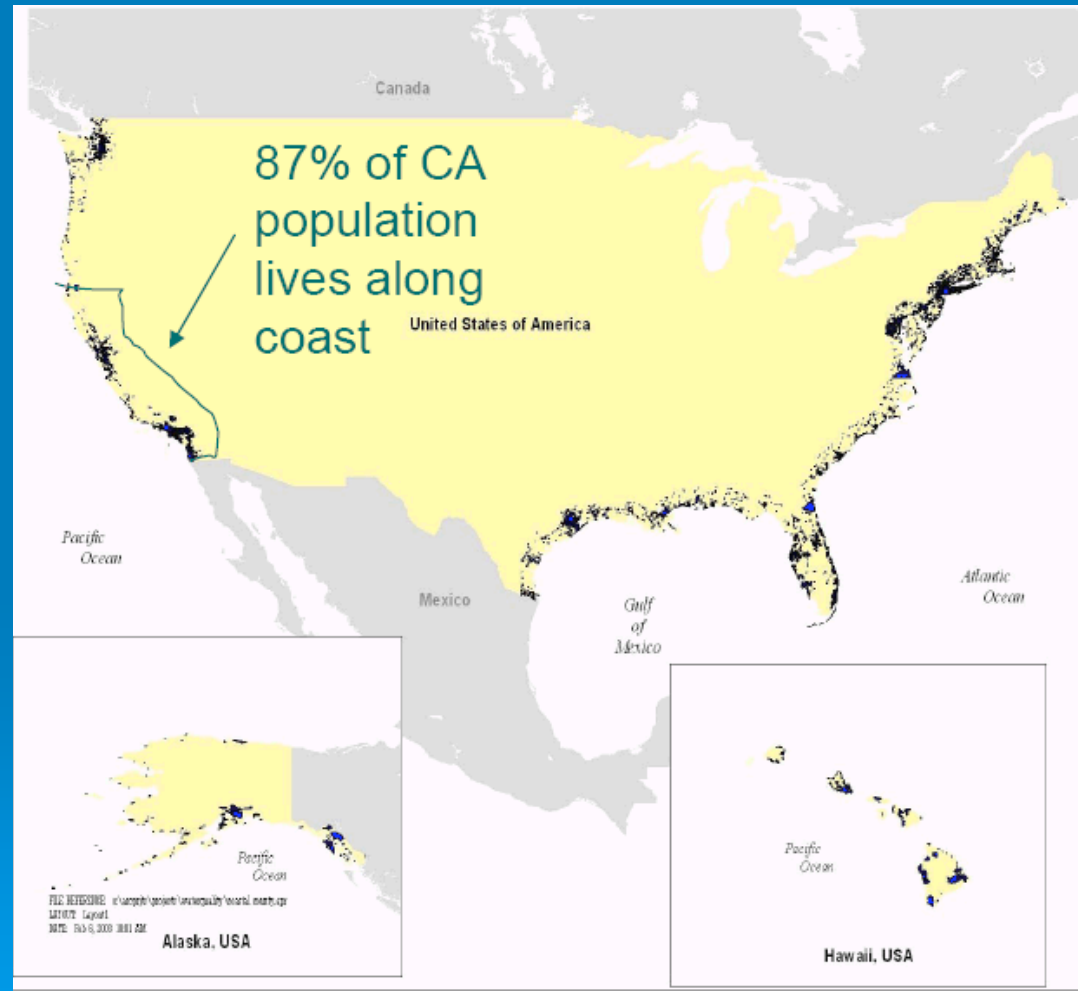
1. Need

- Avoid Squandering Time and \$
- Crisis is a Great Motivator

California Population Trend

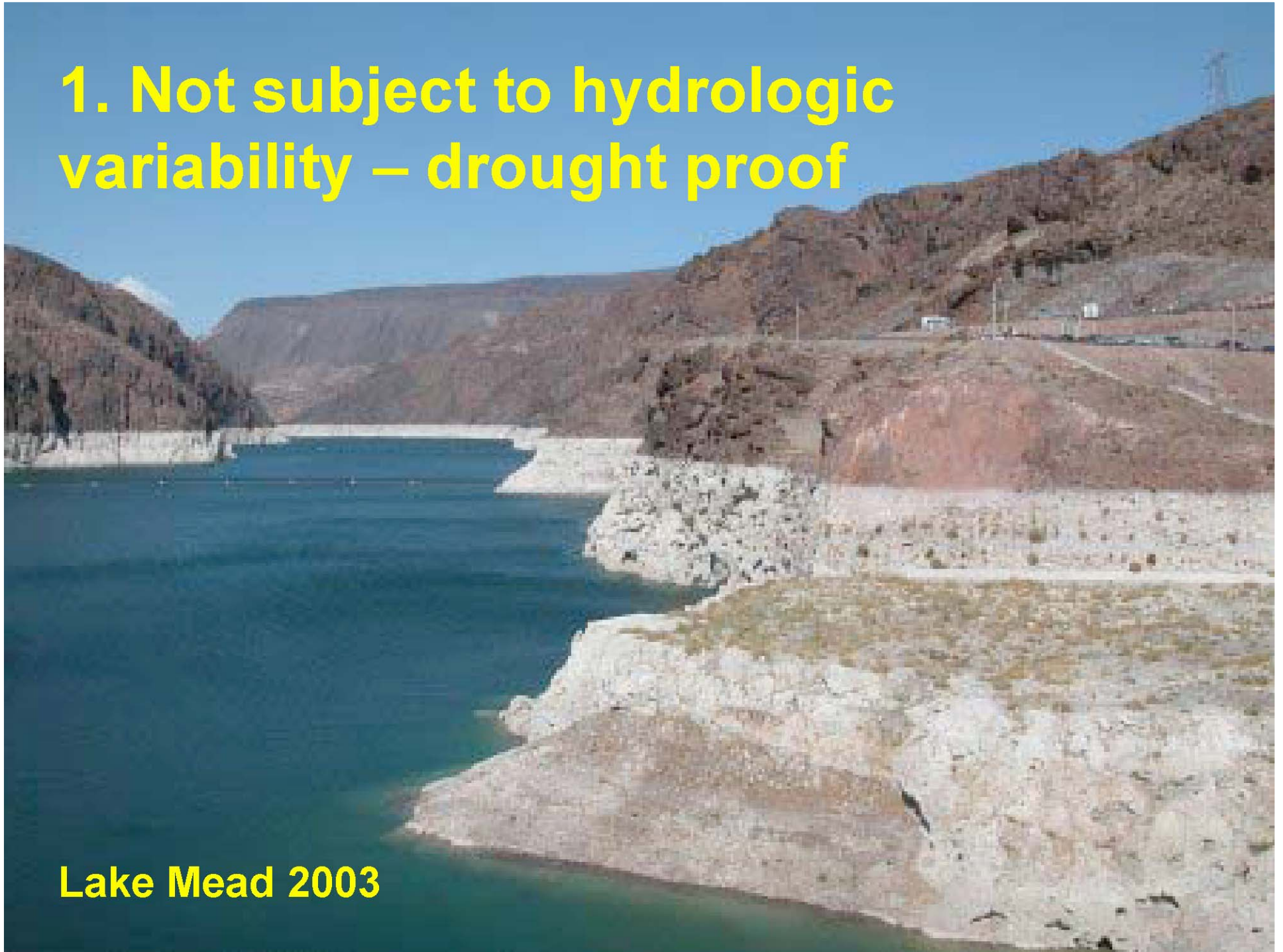


Population Dispersion



1. Not subject to hydrologic variability – drought proof

Lake Mead 2003



California Water Background



- Population:
 - 2006 36 million
 - 2030 48 million
- About 2/3 of the State's surface water runoff occurs north of Sacramento
- About 2/3 of the State's water needs occur south of Sacramento

Five Necessary Elements

1. Need

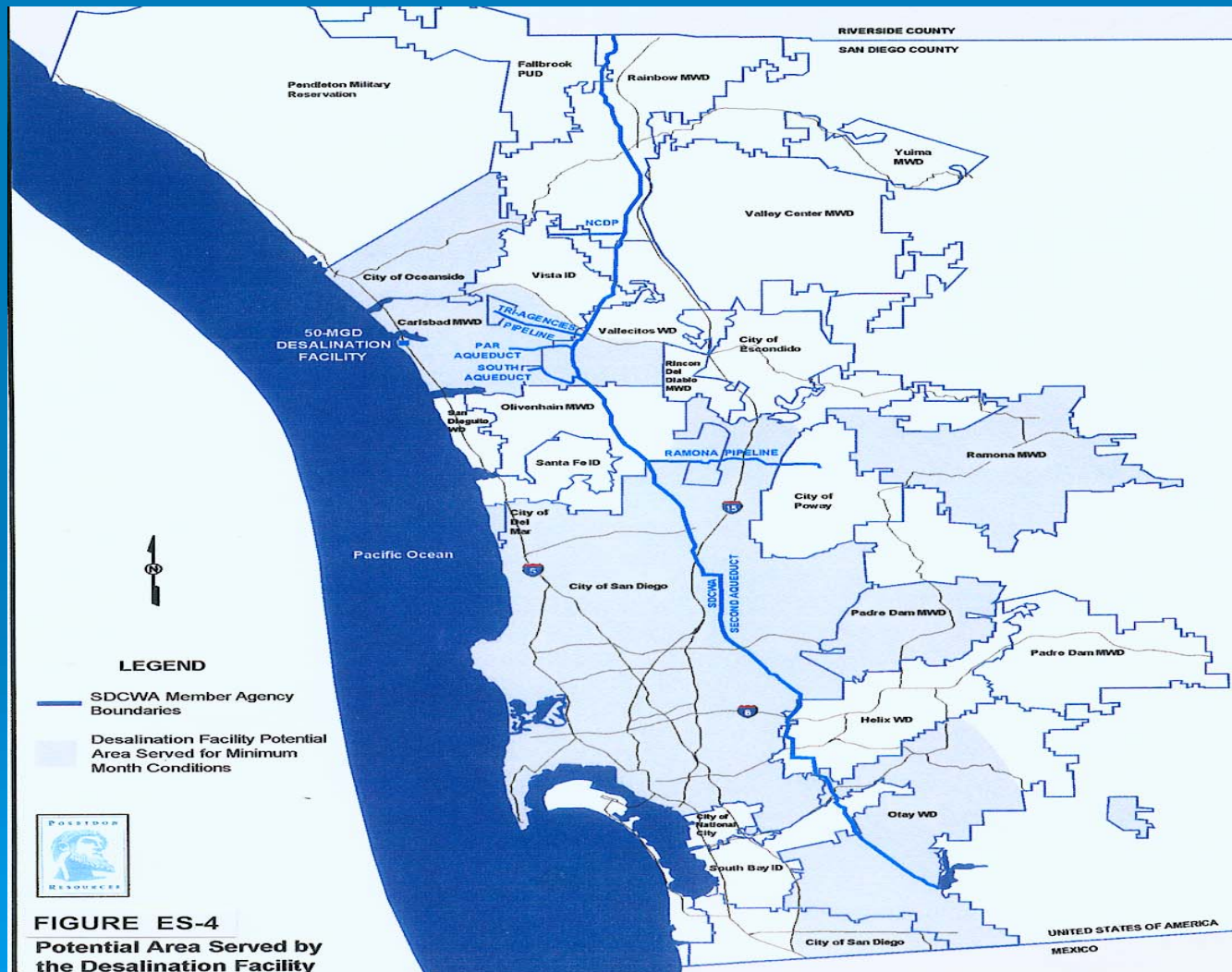
2. Physical Interconnection

- Maximizes Flexibility
- Enables Management of Resources Based on Supply and Demand; e.g. Seasonality

Intra-State Pipelines



Local/Regional Pipelines



Five Necessary Elements

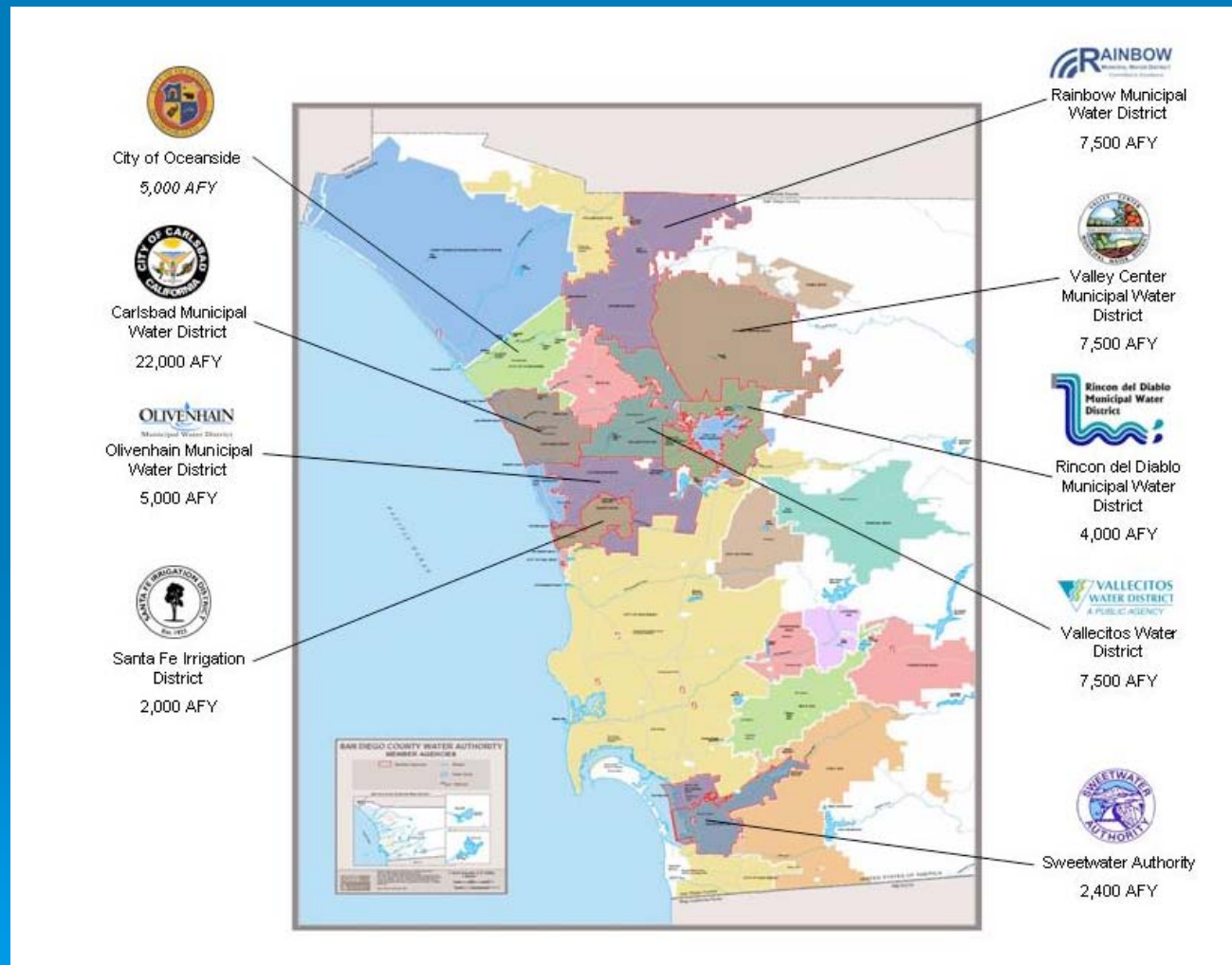
1. Need

2. Physical Interconnection

3. Organizational Interconnection

- Forum for Communication
- Framework for Decision-making
- Alignment of Objectives

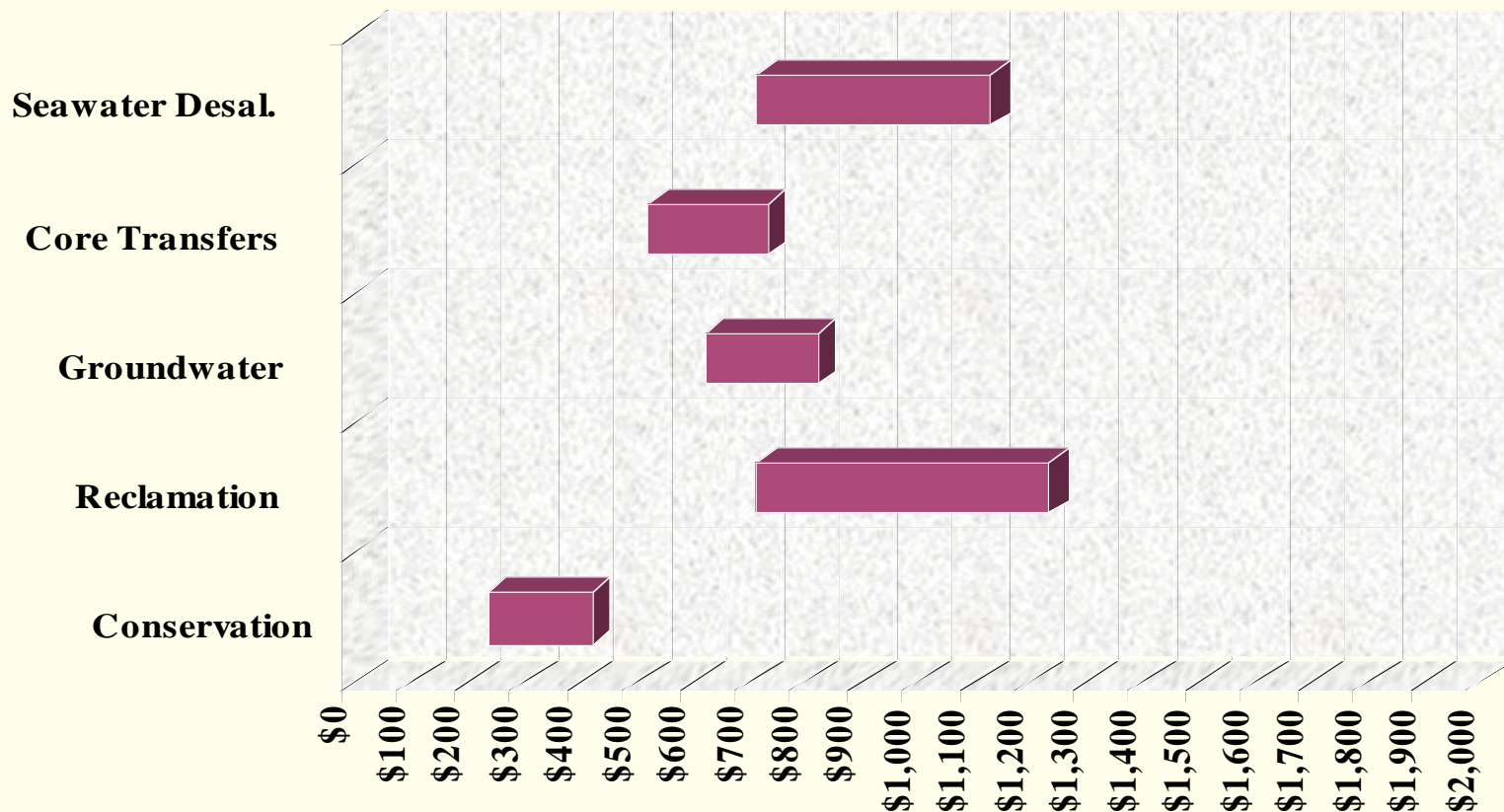
Nine Local Agency Participants



Five Necessary Elements

1. Need
2. Physical Interconnection
3. Organization Interconnection
4. Financial Support
 - Expression of Support
 - Skin in the Game

Water Resource Cost Comparison (dollars per AF)



Source – San Diego County Water Authority

Funding Sources - California

- State-Level Funding Programs – DWR
 - Proposition 50 - \$50 MM for Desalination
 - Proposition 84 – TBD
- Regional - Metropolitan Water District
 - \$250/AF Subsidy for 100+ MGD of Seawater Desalination Projects
- Local – County Water Authority
 - \$200/AF for Supporting Infrastructure

Five Necessary Elements

1. Need
2. Physical Interconnection
3. Organization Interconnection
4. Financial Support
5. Leadership
 - Most Critical – Least Prevalent
 - Drives Action

Local Leadership



CARLSBAD MAYOR
Claude A. "Bud" Lewis

- ✓ Chair of the Carlsbad Municipal Water District (CMWD)
- ✓ Vice Chair of the County Water Authority
- ✓ Member of Metropolitan Water District Board
- ✓ Forceful Proponent of Desalination Project
- ✓ Project Cornerstone - CMWD Water Purchase Agreement
- ✓ Longest Serving Elected Official in San Diego County!

Observations

- Project would not have advanced without multiple cities' and agencies' participation
- All regional stakeholders benefitted, not just project participants
- Created template that was easier to adopt than create something new
- Multiple participants slowed development, resulting in resource delivery that lags demand

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